

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

IN THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method for one-piece injection moulding of a soft needle catheter comprising having a hub and a tube-shaped flexible part, comprising the steps of:

feeding a molten polymer into a mould comprising having a core which is used to form an interior of said catheter, the mould and the core together define defining a hub cavity and a tube-shaped cavity having a cylindrical part, said feeding step including using a said core having a cone-shaped part within that extends from the hub cavity and a cylindrical part, said core being used to form the interior of the catheter into the tube-shaped cavity;

removing the core from the catheter when the polymer has been sufficiently cured for the core to be removed; and

removing the catheter from the mould when the polymer has been sufficiently cured to be removed;

~~characterized in using a core wherein the cone-shaped part of the core extends into the tube-shaped cavity.~~

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

2. (Currently Amended) A The method according to claim 1,
wherein the catheter is cured to it its final state in the mould.

3. (Currently Amended) A The method according to claim 1,
wherein the molten polymer is supplied to the mould via at least
two inlets ~~preferably the inlets are placed symmetrically around~~
~~the axis of the core.~~

4. (Currently Amended) A The method according to claim ‡ 3,
wherein the inlets are placed at the hub forming part of the mould.

5. (Currently Amended) A The method according to claim 1,
wherein the mould separates along the axis of the tube-shaped part.

6. (Currently Amended) A The method according to claim 1,
wherein the mould separates perpendicular to the tube-shaped part
and at or just below the hub.

7. (Currently Amended) A The method according to claim 1,
wherein the polymer is chosen from the group consisting of
polyester ethers, ECDEL, styrene based TPE, olefin based TPE,

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

8. (Currently Amended) A The method according to claim 1, wherein the polymer is selected from the group consisting of polypropylene, C-FLEX.TM., mixtures of C-FLEX™ and polypropylene, LUPOLEN™ 1840H, LUPOLEN™ 3020D, PELLETHANE™ 2363-75D, PELLETHANE™ 2363-55D, TECOTHANE™ and CARBOTHANE™.

9. (Currently Amended) A The method according to claim 1, wherein the polymer has a shore between 40 and 60D.

10. (Currently Amended) A The method according to claim 1, wherein more than one polymer is used in the method.

11. (Currently Amended) A soft needle catheter formed by one-piece injection moulding of polymer using a mould that, with a core, defines a hub cavity and a tube-shaped cavity, the core being removed from the catheter when the polymer is sufficiently cured and the catheter being removed from the mould thereafter, the catheter comprising a hub and a tube-shaped flexible part made with the mould and core, characterized in that the an interior of said

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

tube-shaped part having both ~~has~~ a cone-shaped part and a cylindrical part.

12. (Currently Amended) A The soft needle catheter according to claim 11, wherein the cylindrical part is placed at ~~the an~~ outlet of the tube-shaped part.

13. (Currently Amended) A The soft needle catheter according to claim 11, wherein the hub is fitted with means for assisting the removal of the catheter from the patient, ~~preferably in form a flap, a rim or a groove.~~

14. (Currently Amended) A The soft needle catheter according to claim 11, wherein the hub is fitted with ~~at least one carving,~~ ~~preferably two carvings placed opposing each other.~~

15. (Currently Amended) A The soft needle catheter according to claim 11, wherein the hub has means for sealing the hub to a drug delivery device, said means being provided on the outside of the hub in form of at least one round going packing, rim or fin or by having a hub with a cone shaped exterior having a size suitable to fit into a cone shaped cavity of a drug delivery device.

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

16. (Currently Amended) A The soft needle catheter according to claim 11, wherein the tube-shaped part of the soft needle catheter has a ratio between the cylindrical part and the cone-shaped part in the range from 10:1 to 1:40, preferably the range is from 5:1 to 1:30, more preferably the range is from 2:1 to 1:20 and most preferably from 1:1 to 1:15.

17. (Currently Amended) A The soft needle catheter according to claim 11, wherein the cylindrical part is 1.5 mm.

18. (Currently Amended) A The soft needle catheter according to claim 11, wherein the cylindrical part is rounded.

19. (Currently Amended) A The soft needle catheter according to claim 11, wherein the polymer is chosen from the group consisting of polyester ethers, ECDEL, styrene based TPE, olefin based TPE, urethane based TPE, ester based TPE, amid based TPE polyolifines and silicone rubbers.

20. (Currently Amended) A The soft needle catheter according to claim 11, wherein the polymer is selected from the group

Serial No.: 10/712,260
Atty. Docket No.: P69290US0

consisting of polypropylene, CFLEX™, mixtures of C-FLEX™ and polypropylene, LUPOLEN™ 1840H, LUPOLEN™ 3020D, PELLETHANE™ 2363-75D, PELLETHANE™ 2363-55D, TECOTHANE™ and CARBOTHANE™.

21. (Currently Amended) A The soft needle catheter according to claim 11, wherein the catheter is composed from more than one polymer.

22. (Canceled).

23. (Canceled).

24. (New) The method according to claim 1, wherein the inlets are placed symmetrically around an axis of the core.